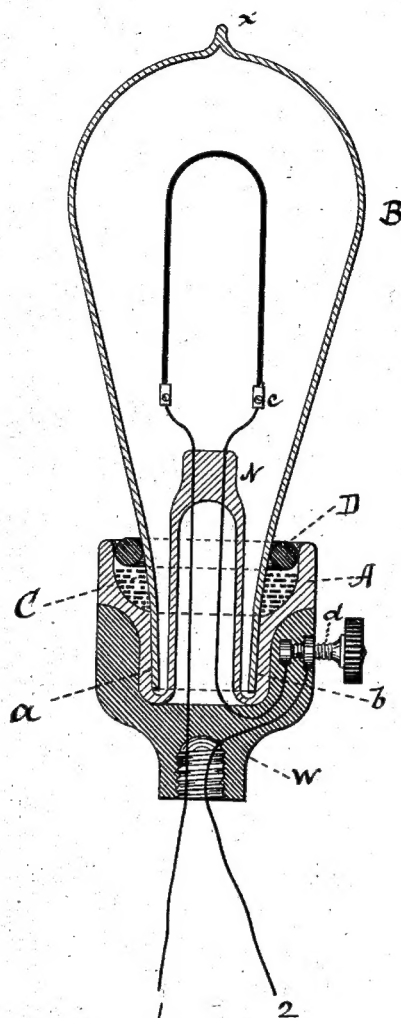


(No Model.)

T. A. EDISON.  
ELECTRIC LAMP.

No. 263,878.

Patented Sept. 5, 1882.



Attest:

*D. D. Elliott*  
*J. W. Howard*

Inventor:

*Thos. A. Edison*  
*per Dyer & Miller*  
*Attys*

# UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF MENLO PARK, NEW JERSEY, ASSIGNOR TO THE  
EDISON ELECTRIC LIGHT COMPANY, OF NEW YORK, N. Y.

## ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 263,878, dated September 5, 1882.

Application filed December 15, 1880. (No model.)

### *To all whom it may concern:*

Be it known that I, THOMAS A. EDISON, of Menlo Park, in the county of Middlesex and State of New Jersey, have invented a new and useful Improvement in Incandescent Electric Lamps, (Case 271;) and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention relates to that class of electric lamps in which the light is caused by the incandescence of a carbon filament, and has for its object the production of an arrangement which will maintain a vacuum in the globe which contains the carbon.

In prior applications and patents I have shown methods of sealing the various parts of the lamp together by a fusion of the glass itself, thereby forming at the joints a vitreous seal of the same character and durability as the body of the lamp itself. Under some circumstances an unfused seal may be sufficient, the parts being put together so that while a joint practically tight for a limited period is secured they may, when desired, be separated. To accomplish this may be stated as the special object of the invention hereinbefore set out in more general terms. My arrangement for this purpose consists in setting the globe in a glass socket, both being ground, so that they will fit tightly together. Afterward, the space left being filled with mercury and a packing of rubber used to close the whole tightly and retain the mercury in the space, the air is exhausted from the globe at its top, which is then sealed, so that a vacuum is maintained.

The accompanying drawing is a sectional view of a lamp constructed according to my invention.

W is an insulating-base, usually of wood. A is the glass socket fitting therein. It is, when seen in section, somewhat of the form of the letter W, the central limb being extended upwardly and forming a support for the wires

leading to the clamps, the wires being suitably sealed therein, this central portion extending up within the body of the globe B. The socket A is ground at *a* and the globe B correspondingly ground at *b*, so that they fit tightly together. A space, C, is thus left, which is filled in with mercury, forming a liquid seal. Above the mercury is placed a rubber ring, D, which fits tightly and prevents the mercury from escaping.

1 2 are the wires of the circuit, by which electricity is supplied to the lamp. These wires terminate in the platinum clamps *c*, which hold the carbon. A portion of the circuit is formed by the screw *d*, which may be drawn back to break the circuit and extinguish the lamp, or vice versa.

After the globe B is blown a stem remains at *x*, by means of which the air is exhausted, and the globe is then sealed and the stem broken off, leaving the globe perfectly air-tight and keeping a vacuum in its interior.

What I claim is—

1. The central tube conductor or support for the incandescing conductor, formed with a chamber at its base and fitted to receive tightly therein the neck of the inclosing globe, substantially as set forth.

2. In an incandescing lamp, the combination of the chambered central tube or support and the inclosing globe, ground or adapted to fit tightly, substantially as described.

3. The combination, in an incandescing lamp, of the chambered central tube or support adapted to hold a liquid seal, the inclosing globe having a neck fitted to the chamber, and a packing for securing the liquid seal, substantially as set forth.

This specification signed and witnessed this 3d day of December, 1880.

THOS. A. EDISON.

Witnesses:

H. W. SEELY,  
WM. CARMAN.